7.3

Review balancing chemical equations

<http://www.teachertube.com/view_video.php?viewkey=c23d689f347236c7ab49>

Factors that affect rates of reaction

Some reactions occur quickly (match) and others slowly (paint or glue drying). Why is this?

How would you build a fire:

The Kinetic Molecular Theory: A collision model

The Kinetic Molecular Theory states that particles are continuously moving and that they move more quickly at higher temperatures. As particles or molecules move about they hit or collide with each other.

Slow moving / Stable particles simply bounce off one another and no reaction occurs.

Faster moving harder hitting particles may have atoms that come apart and create new molecules (REACTIONS) Only a small fraction of the collisions are effective in causing a reaction.

From this how would we change the rate of reactions?

1. Increase the number of collisions
2. Increase the number of effective collisions

From this what factors would cause these two things to occur? Read the section in the text book page 261 - 264

1. Temperature – the most important factor for rates of reaction
2. Concentration – more molecules increases the chance of effective collisions
3. Surface area – larger the area of contact the increase chance of effective collisions
4. Catalyst – increases the rate of reaction with out being consumed by the reaction. It provides and easier way for a reaction to occur.

<http://videos.howstuffworks.com/hsw/27494-physical-science-rates-of-chemical-reactions-video.htm>

Read section and answer the Understanding concepts questions. Page 264